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**CONCURRENT DYNAMIC PRICING MARKETING**  
**AND SELLING SYSTEM**

5 This application is based on and claims benefit of Provisional Application  
No. 60/193,739, filed March 31, 2000, entitled Network-Based Multi-Dimensional  
Marketing System, to which a claim of priority is made.

**BACKGROUND OF THE INVENTION**

**1. Field of the Invention**

10 This invention generally relates to a marketing and sales system using a  
network, and more particularly, relates to a system of selectable rules which provide  
flexible and dynamic sales and marketing approaches concurrently.

**2. Description of the Related Prior Art**

15 Consumer shopping using on-line or electronic forums has been known for  
some years. With the advent of the Internet and the World Wide Web, access to  
merchants and consumers alike has increased dramatically. Ease of use and  
decreased overhead have contributed to making on-line shopping forums both  
attractive and affordable.

20 As participation in on-line shopping has increased, various pricing  
methodologies available through the uniqueness of the above described mediums  
have been explored. One such method is known as dynamic pricing, in which the  
price of a given item fluctuates with demand.

Dynamic pricing methods have been used successfully in on-line forums  
where buyers wish to purchase similar or identical items. These on-line forums are  
typically described as auctions or a "name your price" system in which a number of

potential purchasers can review products offered by one or more manufacturers. Typically, an auction-type forum permits a number of bidders to submit prices which they are willing to pay for a particular item, over a particular period of time. For example, a product may be offered in an on-line forum, which may be reviewed by a number of purchasers over the course of a week. Each person reviewing the item may potentially submit a bid on the item within certain constraints, such as a minimum price. Once the set period of time has passed, in this instance a week, the highest bidders will receive the item for sale. If there were no bids over the fixed price for permitting a sale, then no sale is made.

10           This type of on-line auction is typically referred to as a vertical auction. That is, the potential purchasers bid against one another in a single forum for a unique item, or a group of unique items.

15           Another approach to on-line sales is to take advantage of reduced overhead costs associated with sales on the Internet. Merchants typically offer items for sale on a website, which are identical or very similar to products offered in retail stores. The fact that merchants generally do not have to pay for retail space to advertise or sell these items on line, means that the sales price can be reduced relative to traditional retail stores. In addition, a purchaser may find it much more convenient to shop and purchase items on-line, rather than travel to a retail store to obtain merchandise. In this sense, a merchant's website can function as an electronic catalog that provides purchasers with a product discount.

20           While a number of approaches outlined above may be used on a particular website, a variety of types of websites are available in various marketing sectors. For example, a distributor may have access to a large inventory made up of goods from a variety of manufacturers, which the distributor may make available on a number of on-line forums. At the same time, each of the manufacturers of the goods may have a website or other on-line forum through which they offer their goods directly to consumers, or to other distributors. A distributor may also feature links to

manufacturers' websites for further product information or help. Distributors may also elicit the assistance of distribution channels for purposes such as discounted or overstocked items. These distribution channels may be volume discount resellers, damaged lot goods resellers or the like. Each of these types of resellers may further  
5 utilize on-line forums to dispose of their goods. In whatever type of approach used by a merchant, or group of merchants, it is typical for a website to feature products offered by a large number of manufacturers. Such a website may also offer links to manufacturers' websites. An individual seeking to purchase one of the manufacturer's products may go to the website and determine that the product may  
10 be offered by local distributors or other qualified vendors. The site may contain links to the distributors or the qualified vendors, so that the purchaser can go directly to the websites which offer the item they are seeking.

As another example, an individual may be accessing a website dedicated to a particular interest or hobby, on which there may exist a link to a vendor's site, on  
15 which is offered a number of products related to the individual's interest or hobby. The individual need only click on the link to go to the site and be offered a variety of the products.

The above described purchasing system is typically referred to as a direct business to consumer (B2C) type of approach for selling products on line. However,  
20 merchants, resellers or distributors can also take advantage of the same sort of approach. For example, a retail merchant may wish to ensure that certain levels of inventory are maintained to meet their customers needs. When the merchant deals with a supplier that offers access to its products on-line, the merchant and the supplier can engage in business to business (B2B) transactions. These type of  
25 transactions are similar to the B2C type of transaction, except that two merchants are involved. Based on the merchants' relationships, advantages such as automatic stocking and inventory control can be achieved. In addition, overall inventory levels

can be reduced, resulting in a reduction in overhead costs associated with inventory storage.

Businesses which can conduct commerce electronically need not be strictly limited to a supplier-distributor type relationship. For example, a business may offer to sell a product lot to a number of other businesses, each of which would bid for the product lot. A particular business may also wish to have a presence on a website which containing content which could be associated with products related to the business, and would compensate the website owner for the opportunity to provide a link to the business' web page, or a specific area of the business' website. A business wishing to have a presence on an associated website may include a "sticky" functionality, which would allow the user, whether an individual or a business, to return to the original associated site after viewing the business' website.

Other advantages of on-line sales and marketing approaches involve the development of customer profiles, customer lists and an option for corresponding directly to a customer through E-Mail. For example, once a purchaser completes a transaction on a website, their information submitted in the course of the transaction can be recorded for future use. A profile can be developed over time which reflects the purchasers' interests and preferences. The purchaser can also be offered the option of being contacted by E-Mail if a particular offer matching their profile becomes available. This type of an approach to satisfy customer desires, also referred to as a type of data mining, helps the merchant tailor their products and offerings to particular groups of consumers, or even individuals. The resulting increase in efficiency for sales and marketing models helps to reduce the merchant's overhead while contributing to increasing profitability.

The approaches and facets of sales and marketing approaches discussed above all share the difficulty of dealing with returned, overstocked or end-of-life inventory in an efficient and cost effective manner. Many types of businesses lose money on merchandise which can no longer be sold through the businesses' existing

distribution channels at an acceptable recovery rate. Typically, the longer this type of inventory is held, the less valuable it becomes. It is not unusual for businesses to receive a return of 10 to 15 cents on the dollar for these types of items which they are required to move from their inventory.

5           Typical rates for merchandise return and overstocking of inventory run around 10% in both areas respectively. In a recent holiday season, close to fifty million orders were placed on line. The resulting excess inventory ran around ten million units. The loss of profits with respect to these items runs in the billions of dollars. Retailers and merchants will typically sell their overstocked and returned  
10       items to third parties for a considerable discount. In addition, the longer an item is held in inventory, the less valuable the merchandise becomes.

          The present invention solves the problems of the prior art by providing an electronic system for efficiently disposing of returned and overstocked inventory. The present invention realizes a number of advantages for retailers and merchants in  
15       improving their excess inventory recovery rate.

### **SUMMARY OF THE INVENTION**

          It is an object of the present invention to provide a marketing and sales system which overcomes the above described drawbacks of conventional systems.

          Briefly stated, there is provided according to the present invention a system  
20       for liquidating excess or returned inventory in which the system has a variable pricing strategy for quickly liquidating unsold or returned inventory items. The pricing strategy is interactive, and includes a flexible current price, a facility for a demand price, an open order mechanism and a buyer auction scheme. Sellers interact with the system to set minimum prices and permitted increments of changes  
25       in price or when price changes are displayed. Buyers can choose to acquire a certain amount of a product at the current price, or set an amount they are willing to pay over a particular period of time. Sellers can adjust prices based on buyer responses

and arrive at an optimal pricing strategy over a given period of time to meet their requirements for inventory liquidation. The system can be used in on-line shopping forums and is available through a number of access points including affiliated websites, distributor and manufacturer websites and portal type websites. The  
5 system permits the liquidation of excess or returned inventory in a desired amount of time with an improved recovery price.

This system permits a merchant to dynamically price enable a single product, a group of products or an entire website.

According to an embodiment of the present invention there is provided a  
10 marketing system for providing a buyer access to inventory items of a seller, comprising: an inventory presentation tool accessible to a plurality of buyers through at least one medium, the inventory presentation tool being effective to provide an indication of an available quantity of an item and a plurality of pricing schemes, at least one of the pricing schemes permits the buyer to request an  
15 immediate purchase at an immediate purchase price and at least another of the pricing schemes permits the buyer to request a deferred purchase at a deferred purchase price.

The merchant establishes the business rules i.e. price, reserve price, percentage movement of the product prices and the time expiration of the offer  
20 among other variables related to the business rules.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

The above, and other objects, features and advantages of the present invention will become apparent from the following description read in conjunction with the accompanying drawings in which:

25 Fig. 1 is a schematic diagram of the interconnectivity provided by the system of the present invention;

Fig. 2 is a schematic representation of the functional components of the system according to the present invention;

Fig. 3 is a graphic representation of an embodiment of the system according to the present invention; and

5 Fig. 4 is a graphic representation of another embodiment of the system according to the present invention.

### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Referring now to Figs. 1 and 2, a diagram of the components of the overall system is shown. Each of the interface components are interconnected through a  
10 public communication network 34 such as, for example, the Internet. User terminals 20 are used to browse various content sites provided by, among others, merchant processors 22. User terminals 20 represent access to the Internet available to consumers, manufacturers and merchants. Consumers, manufacturers and merchants can access a sales tool 16 which is available over a communication network such as  
15 the Internet. From a consumer viewpoint, access to sales tool 16 can appear on a given website as an icon, a button or a branded link. A branded link offers the consumer a well-known brand name in association with sales tool 16 to promote consumer responsiveness.

Once the consumer accesses sales tool 16, they are presented with a shopping  
20 channel 50 for choosing a type of merchandise in which they are interested. Depending on the type of access to sales tool 16, shopping channel 50 may be preselected, and the consumer display will bypass selection of shopping channel 50.

Referring to Fig. 3, the consumer is then presented with a number of inventory items, each with an associated quantity, retail price and a current price 38.  
25 The consumer can then select an item and a purchasing method as discussed below.

Referring also to Fig. 4, another embodiment of sales tool 16 according to the present invention is shown. In this embodiment of the present invention, a particular

item is shown with information about retail price, quantity, when an offer expires and details about the item. Also displayed are the various purchasing options together with current information regarding the various options, such as the present bid to beat according to an auction option.

5           A manufacturer catalog company, an e-tailer or other merchant may use sales tool 16 from a seller's viewpoint to dispose of excess inventory. The merchant may host a website 32 which provides access to sales tool 16, through which the merchant may offer various merchandise. The merchant sets various parameters in sales tool 16 as described in more detail below. In addition, the merchant can view various  
10 sales using sales tool 16 and reevaluate a sales strategy.

          A merchant can use sales tool 16 from the viewpoint of a buyer and a seller. For example, the merchant may purchase inventory items from other merchants or manufacturers for resale, in the same fashion as described above with respect to consumers. The merchant may also sell products using sales tool 16, and set  
15 parameters and receive feedback in the same way the above described manufacturers would.

          Sales tool 16 according to an embodiment of the present invention offers the user the choice of a shopping channel 50, which is related to a particular category of goods as discussed above. Once shopping channel 50 is chosen, the user is offered  
20 all the products in that particular channel which are available for purchase. The user can then select a product to purchase, and choose a dynamic pricing method for completing the sale.

          The first pricing method uses an immediate price strategy, and works on a simple principle of supply and demand. The user is shown a quantity of a particular  
25 item which is available, a retail price, a current price 38, a time and date at which an offer of sale for the item ends and whether current price 38 is trending up or down. The immediate price strategy for clearing excess inventory makes the user aware of some of the issues related to the product's market status. The user can then make an



informed decision whether to purchase the item immediately, wait until the market situation is more favorable or choose another method of purchase.

5 The user may also purchase a product by placing an open order 40. This approach is similar to the immediate price strategy, except that the user may seek a purchase price lower than current price 38. The user places open order 40 at a price below current price 38, and awaits the results of shifts in price trends. If current price 38 reaches the price submitted in open order 40 due to shifts in pricing trends, open order 40 is filled and the user receives the product. Open order 40 is valid for the length of time for which the product offer is open. Thus, open order 40 may be  
10 made or filled at anytime during the product offering provided that the pricing criteria is met.

The interested shopper can also submit a demand price 42. This approach permits the shopper to request and commit to a set price below current price 38 of the item. Demand price 42 is good for twenty-four hours, and is either accepted or  
15 declined based on a set of business rules determined by the particular merchant. For example, if the merchant wishes to dispose of an entire lot of products, and demand prices 42 received over a twenty-four hour period total the price desired by the merchant for the entire lot, all demand prices 42 are accepted. If all of demand prices 42 do not total the amount desired by the merchant for the lot, then only those  
20 demand prices 42 which exceed the average price for the items in the lot will be accepted, and all others will be declined. Each demand price 42 is evaluated at a given point over a twenty-four hour period until expiration of the time period for which the item is offered. Thus, each demand price 42 will be evaluated within twenty-four hours of when it is submitted, and either accepted or declined based on  
25 the criteria for demand price 42. Each buyer is isolated in their purchases from any other demand price buyer, and is not aware of other demand prices 42 made by other shoppers. The number of items available for demand pricing may change as items

are sold through the above-mentioned current price 38 and open order 40 sales approaches.

Another approach a shopper can take to acquire the item at a reduced price is by submitting a bid price 44 in a variable auction. According to this approach, the merchant sets an initial start price for each product in the lot and chooses a bid increment. Shoppers choosing to use this auction approach submit bid prices 44 for the available products. The top bid prices 44 for the product are displayed to all users viewing information about that particular product. Once the auction is completed, the orders with the highest bid prices 44 for the product is filled. Bid price 44 is not limited to a single item, but can be submitted for a quantity of a particular product as well.

A winning bid price 44 for a quantity of a particular product may not necessarily be equivalent to the highest bid price 44 for an individual item. Again, the number of items available through the variable auction approach is reduced as purchases are made through current pricing and demand pricing approaches mentioned above. Since a shopper can submit bid price 44 for a quantity of the products offered, an initial bid price 44 based on volume discount perceptions, may be very attractive to both the bidder and the seller, especially if there is a large quantity of products. However, as the quantity of goods available drops due to purchases made using current price 38, open order 40 or demand price 42 approaches, the previously submitted quantity bid price 44 may no longer be as competitive. Other bid prices 44 for smaller quantities at higher prices will typically begin to appear in greater numbers as the total quantity of items decreases, putting the previous bid prices 44 out of the running. The variable auction provides an incentive to submit higher bid prices 44 for a given quantity of goods, as the total number of goods is reduced through the above-mentioned pricing methods. In addition, if the highest bid price 44 in the variable auction rises above current price

38, current price 38 is increased above the highest bid price 44 regardless of whether the trend of current price 38 is rising or falling.

5 A shopper can purchase products using any one or all of the above-mentioned pricing strategies. All product orders are added to a "shopping cart" which displays the shopper's purchases upon checkout. When the shopper checks out, all the purchases of the current session are displayed, along with their various pricing strategies under which they were purchased. The shopper can view the shopping cart at any time to review their order and the different pricing strategies under which products were purchased. In addition, the shopping cart screen can offer a special or  
10 bonus type deal when the shopper views the shopping cart.

Once the shopper is satisfied with all of their selections, they can checkout and review the cost for all of their purchases. The checkout screen is similar to the shopping cart screen in that it displays all of the shopper's purchases, with each product listed in its pricing strategy category. The cost of each product in their  
15 respective quantities is totaled and displayed to the user. The total will include open orders 40, demand prices 42 and bid prices 44, which have not necessarily been filled when the user checks out. Demand prices 42 will be processed within a twenty-four hour period after checkout.

Once the user checks out, they are presented with a request for payment  
20 information, such as credit card information. Any payment information is transmitted over a secure channel and encrypted to protect the individual's personal and financial data. The payment is confirmed by the system and the user receives and order number reflective of their purchase. The order is also confirmed through E-Mail, which can contain customer service representative contact information.

25 Typically, a business entity with excess inventory will wish to dispose of the inventory quickly and efficiently, while retaining as much value for the inventory products as possible.

5 A business entity with excess inventory can use the system according to the present invention to dispose of their excess inventory in aggregate, or one piece at a time. Aggregate sales typically dispose of excess inventory in lots with a price set that is equivalent to a wholesale price. Individual items are sold singly with prices subject to change on an individual basis. The business entity can set either a floor, or minimum price for the product they wish to offer, or investigate a dynamic pricing model to dispose of the excess inventory in a way which maximizes a specified criteria.

10 The system according to the present invention permits a business entity to take advantage of several different forums for disposing of excess inventory. The first forum available through this system is a large number of general commerce websites viewed by large numbers of consumers on a constant basis. These websites can be oriented to a particular community, interest or area of commerce, and are each affiliated with a centralized entity for offering the excess inventory products.

15 Another forum for clearing excess inventory is through a particular business entity selling its own excess inventory on the Internet. The business entity can use a tool according to the present invention on their website to offer methods to the public by which excess inventory can be cleared quickly.

20 Another technique to provide access to a forum is to attach a company's icon or banner to the tool according to the present invention. When the company is affiliated with a number of other websites, each of those websites can carry a button associated with the company which permits the user to access the company's excess inventory products which are desired to be liquidated.

25 Using the system of the present invention, merchants are able to set simple rules for how the products will be offered, according to their needs for disposing of excess inventory. At a high level, the merchant can choose whether to focus their strategy on price or an amount of time during which they wish to have sold all of the their excess inventory. Each of these high level choices involves strategic use of the

four different dynamic concurrent pricing strategies to best achieve the merchant's goal. The term "concurrent" is intended to mean a system wherein products are sold concurrently across multiple dynamic sales methods.

5 With regard to a best pricing focus, the merchant can set rules for current price 38, open order 40, demand price 42 and bid price 44. For the current price 38, the merchant can choose a start price for each product in a given lot which is 20 to 40% off of the regular list price, for example. The merchant then sets a time increment over which price fluctuations are reported. Again, the price fluctuations will depend on supply and demand between the seller and the purchasers.

10 The merchant then also sets the percentage increment by which current price 38 of a product can move up or down. Current price 38 will drop a certain percentage over a given period of time (i.e., 3% drop every 6 hours) as set by the seller if the demand is low. If there is greater demand for the product, an appropriate increase will be made to the current price 38 of each product. Accordingly, after each  
15 purchase, current price 38 of the product will rise by a certain percentage increment (i.e., 1% rise), again as set by the seller. According to an embodiment of the invention, current price 38 is preferably the highest price available through any of the four dynamic concurrent sales methods. If bid price 44 given by the highest bid in the variable auction increases above current price 38, current price 38 is increased to  
20 reflect the amount of the highest bid. This price increase resulting from elevated bids in the variable auction will occur regardless of whether current price 38 is trending up or down. Moreover, each user/shopper will be able to see a real time display of the quantity of particular products available and be able to assess the relative value of a product through the various price strategies. The user/shopper can then make  
25 decisions about purchases based on how quickly, or at what price, an item is selling, for instance, choosing to purchase at current price 38 rather than waiting for better prices under any other price scheme.

The demand pricing dynamic model permits the merchant to set a price for an entire product lot. The total price for the lot is used to determine an average price for each individual product in the lot. Over a period of twenty-four hours, the various demand prices 42 are aggregated and analyzed to determine if they meet the requirements set by the merchant for the lot. If the aggregate amount of demand prices 42 meets the total amount for which the merchant wishes to sell the entire lot or that portion for which demand prices 42 were submitted, all demand prices 42 are accepted, regardless of the amount of variation between the various demand prices 42. If the aggregate amount of demand prices 42 does not meet the price set by the merchant for the lot or portion of the lot, the set of demand prices 42 are examined to find those which are at or above the average price for each product in the lot. Demand prices 42 which meet the average price, or exceed it, are accepted while all other demand prices 42 are declined.

As an example, a merchant may wish to sell ten products at a total price of \$50 for the entire lot. The average price is thus calculated to be \$5 for each piece in the lot. If individual demand prices 42 are submitted on five items over a twenty-four hour period, and the submitted demand prices 42 total \$25, all of the demand prices 42 are accepted. This is true even if four demand prices 42 are \$1 and one demand price 42 is \$21. However, if five demand prices 42 are made over a twenty-four hour period and the aggregate totals only \$9, for instance, then the entire lot is not sold. If the five demand prices 42 are composed of four requests at \$1 and one request at \$5, then the \$5 offer will be accepted as meeting the average item price set by the seller, while the other offers are declined. It is important to note that none of the shoppers submitting demand prices 42 know what any other shopper has submitted as a demand price 42. Shoppers thus make anonymous demands which will be accepted or declined individually within twenty-four hours. As the quantity of products is reduced through purchasers who take the product at current price 38,

the number of products available for the demand pricing strategy is reduced and displayed for shoppers to see.

The variable auction pricing strategy approach permits the merchant to set a start price for each product in a given lot, and then set an auction bid increment.

5 Each shopper can then submit a bid price 44 on one or more products in the lot. The highest bid prices 44 for set quantities of product are displayed to other shoppers in the variable auction pricing strategy. When the auction is over, the highest bid prices 44 for the specified number of products are filled, while all other bids are declined. As mentioned previously from the perspective of the shopper, the number of  
10 products available in the variable price auction is reduced as products are purchased through the above-mentioned pricing strategies. A bidder may have the highest bid price 44 for a set number of items, and become a lower bidder as the quantity of products is reduced. Again, if the highest bid price 44 in the variable price auction rises above current price 38 at which the item is listed, current price 38 will be  
15 increased to be greater than that of the highest bid price 44. This increase in current price 38 will occur regardless of whether the trend for current price 38 is upward or downward.

With the regard to the open order price arrangement, there is no requirement that the merchant set any particular criteria for the individual products or the lot.

20 Simply, if an open order 40 is placed, it will be filled if current price 38 meets the price specified in open order 40. Open order 40 submitted by the shopper is valid until the offer for the particular product and/or lot is ended. The filling of open order 40 therefore only depends on the length of time for which the offer is extended, and the fluctuation in price as products are sold.

25 As products are sold, or as shoppers make offers on products using the various pricing strategies discussed above, the merchant can observe the sales and offers and adjust prices accordingly. For example, the merchant can set different minimum prices for each product, or modify the price for the entire product lot prior

to the expiration of the offer. This adjustment permits the merchant to achieve a very good price for the offered products, which are sold within a desired amount of time.

5 A merchant wishing to offer returned or excess inventory items can also specify a time focus related to the amount of time for which a product is offered. A product offering time period can be varied among the different types of pricing strategies. For example, a merchant can set a time period for which current price 38, is offered which is different from the time period for which the product is offered under demand price 42 or variable auction pricing strategies. Demand price 42 has a fixed time frame of twenty-four hours for shoppers to be informed whether their demand prices 42 have been accepted or declined. The variable auction pricing strategy has a minimum time period of, for example, at least five days for shoppers to submit bid prices 44. However, the merchant can set the upper limit on the length of time for which the auction will run, which can be different than the length of time for which the product is offered under an immediate pricing scheme, as discussed above.

15 Through the use of the above described focus models with regard to pricing and time, a merchant can choose how best to dispose of returns and excess inventory, using the various pricing strategies. The merchant selections permits consumer access to the various products in a number of dimensions, which significantly improves buyer competitiveness in seeking to obtain the products offered. In addition, as quantities of a particular product decrease due to sales through the various strategies, potential buyers are placed under pressure to decide whether they wish to quickly purchase a product which may sell out immediately, or continue to wait for a potential purchase at a lower price using the time variable pricing strategies. The result of this pressure is that the merchant can sell a greater number of returned or excess inventory items in a shorter amount of time, while recovering a higher percentage of the product's value.

It should be readily observed that the shoppers can consist of, for example, individual consumers, bulk purchasers for redistribution, purchasing agents who



wish to obtain excess inventory or consumer warehouse type outlets which sell consumer products at wholesale rates. The merchant also has the option of deciding where their products will be listed. The merchant can choose one or more forums through which potential customers will access the present invention to permit the merchant's products to be made available. As was mentioned above, for example, the merchant's products can be made available on affiliate websites related to a particular community, interest or area of commerce. The merchant can also offer their excess inventory products through their own dedicated website. In addition, a well-known Internet marketing entity can be provided with a branded custom tool to access the system of the present invention, which may appeal to an audience desiring the market recognition of the Internet entity.

The system of the present invention also offers a facility for the shopper to select notices by E-Mail. If the user chooses this option, they will be provided with special deals or products which may be specific to a demographic of which the shopper is a member. The E-Mail notification feature can also work in conjunction with bonus or special offers which are made available when the user checks out from the system as described above.

In addition to selecting payment options when a purchase is made, a shopper is also made aware of various shipping options, handling policies, privacy issues and product guarantees. The customer has the option of specifying particular delivery options as well.

Although the present invention has been described in relation to particular embodiments thereof, many other variations and modifications and other uses will become apparent to those skilled in the art. It is preferred, therefore, that the present invention be limited not by the specific disclosure herein, but only by the appended claims.